

REMARKS

In the above-identified Office Action the examiner rejected claims 7, 9, and 10 under 35 USC 102(b) as being anticipated by US Patent No. 5,782,989 to Rueter ("Rueter"). The examiner rejected claims 1-6 under 35 USC 103(a) as being unpatentable over US Patent No. 3,985,572 to Petermann, et al. ("Petermann") in view of US Patent No. 4,863,524 to Komabashiri, et al. And the examiner rejected claim 8 under 35 USC 103(a) as being unpatentable over Rueter in view of Komabashiri.

Claims 1-6 are directed to a process including: feeding a liquid selected from the group consisting of water, a caustic solution, and a mixture of caustic and at least one organic solvent through multiple pressure sources to a reactor having an agitator with blades and stationary pressure sources aimed at the agitator blades; and emptying the reactor; wherein the agitator is rotated while the solution is fed to the reactor. Claim 8 is directed to a process for cleaning a reactor including: feeding a liquid solution that is a combination of an aqueous base and an organic solvent and comprises from 15 weight percent to 30 weight percent aqueous base and from 40 weight percent to 60 weight percent organic solvent, based on the total weight of the solution, and the remainder water to the reactor; and emptying the reactor; wherein, the reactor is selected from the group consisting of a plate-frame heat exchanger, a plate-fin heat exchanger, and a spiral-plate heat exchanger.

Claim 8 has been amended to include the elements of cancelled claim 7 from which it depends.

35 USC 102(b) REJECTION OF CLAIMS 7, 9, and 10

The examiner rejected claims 7, 9, and 10 under 35 USC 102(a) as being anticipated by Rueter. Applicants submit that the rejection is moot in view of the cancellation of claims 7, 9, and 10, without prejudice, herein.

35 USC 103(a) REJECTION OF CLAIMS 1-6

The examiner rejected claims 1-6 under 35 USC 103(a) as being unpatentable over Petermann in view of Komabashiri. The examiner points out certain disclosures within Petermann and concedes that Petermann does not disclose stationary pressure sources aimed at the agitator blades wherein the agitator is rotated while the solution is fed to the reactor. The examiner argues that Komabashiri teaches that it is known to clean polymerization reactors using "high-pressure jet cleaning" and rotating an agitator to effect chemical cleaning.

Applicants traverse because the examiner does not meet his burden of providing a prima facie case of obviousness by pointing out any teaching or suggestion within Petermann to modify the structure or method of Petermann by changing the essential nature of his apparatus, i.e., rotating pressure sources and a stationary agitator. In fact, Petermann points out that his cleaning nozzles "... are moved over the inner surface of the tanks along a complex predetermined path by means of a motor drive means which may be controlled by an electronic computer. This is important because the container tanks are often provided with baffles, agitator blades, and other obstructions inside such tanks ... Thus, the spray nozzles must move around such internal obstructions which requires a very complex motion of such nozzles that is accomplished by the computer in accordance with computer programs stored therein." (Petermann, Col. 1, lines 30-43) (emphasis added). Applicants respectfully assert that the fair teaching of Peterman is that it is essential to provide exclusively movable nozzles and, indeed, the complex paths which they may need to traverse may need to be controlled by a computer rather than by the reactor operator. Petermann's apparatus requires (Petermann, claim 1) "...automatic drive means for moving said stream forming means over the container surfaces along a predetermined path to scan said container surfaces with said liquid stream ..". Petermann's

cleaning method requires (Petermann, claim 16) "...scanning said stream over said surface by moving said stream about a cleaning axis and longitudinally along said axis with a support means while maintaining said angle substantially constant ..". The highly controlled movement of the cleaning stream and the structure to achieve that movement is the essence of Petermann's invention. There is no motivation within Petermann to change Petermann's structure or add stationary pressure sources to it or to expect success in so doing.

Nor does Komabashiri perfect the teaching of Petermann. Applicants traverse because cleaning polymerization reactors using high pressure jet cleaning is not taught or suggested by Komabashiri in any positive way nor would Komabashiri's teaching motivate one to use inadequate high pressure jet cleaning in other processes. Rather Komabashiri teaches that "It is usually difficult, however, for the high pressure jet cleaning to remove scales completely." (Komabashiri, column 1, lines 32-33) and "The high-pressure jet cleaning cannot be used for such a purpose since it does not completely remove the scales." (Komabashiri, column 1, lines 37-39). Applicants respectfully submit that one skilled in the art would not be motivated by Komabashiri to use high-pressure jet cleaning in general or in the method of Petermann. The actual focus of the teaching of Komabashiri is to fill his kettle with cleaning solution and to rotate the agitator, but that teaching, when combined with Petermann, does not provide any teaching or suggestion of applicants' invention. Applicants respectfully submit that their invention of claims 1-6 is not unpatentable under 35 USC 103(a) over Petermann in view of Komabashiri. Applicants respectfully urge the examiner to withdraw this rejection.

35 USC 103(b) REJECTION OF CLAIM 8

The examiner rejected claim 8 under 35 USC 103(a) as being unpatentable over Rueter in view of Komabashiri. The examiner repeated

his characterization of Rueter and stated that Komabashiri disclosed certain levels of aqueous base and organic solvent. The examiner stated that Rueter discloses a process for cleaning a reactor comprising feeding a solution selected from an aqueous base, an organic solvent of isopropanol and acetone, emptying the reactor; wherein the reactor is a heat exchanger. Applicants respectfully traverse. Rueter discloses a solvent system (Rueter, col.1, lines 8-13) useful as a cleaning solution; the system contains acetone and one or more organic solvents which are soluble in acetone, and, at most, a minor amount of a strong base (the composition may include) up to about 5% water which may be added dissolved in minor amounts of water, but there is no teaching or suggestion in Rueter of an aqueous cleaning composition nor motivation to use Komabashiri's cleaning solutions.

Further, Rueter does not teach or suggest a reactor which is a heat exchanger but rather a system which includes a "reactor per se, heat exchanger, etc" (col. 6, lines 19-20) and certainly does not provide motivation to use a reactor which is a plate-frame heat exchanger, a plate-fin heat exchanger, or a spiral-plate heat exchanger nor to solve the problem of cleaning such a reactor. Nor does Komabashiri provide motivation to use the heat exchanger reactors of applicants' method.

Applicants respectfully submit that the examiner has not met his burden of establishing a *prima facie* case of obviousness with his rejection of claim 8 for obviousness over Rueter in view of Komabashiri since he has provided no indication of the teaching, suggestion, or motivation within either Rueter or Komabashiri to combine the two references in order to solve the problem faced by applicants. The examiner has identified elements of applicants' method within the references, but has not pointed to the reason for combining them. "Although a reference need not expressly teach that the disclosure contained therein should be combined with another, the showing of combinability, in whatever form, must nevertheless be "clear and particular""

Winner International Royalty Corporation v. Wang, 202 F.3d 1340 quoting *In re Dembiczak*, 175 F.3d at 999, 50 USPQ2d at 1617.

Applicants respectfully request the examiner to withdraw his rejection of their method of claim 8 under 35 USC 103(a) as being unpatentable over Rueter in view of Komabashiri.

Applicants respectfully request the examiner to consider applicants' amendment and remarks and to pass applicants' claims 1-6 and 8, as amended, to allowance at this time. Applicants' agent is available in order to expedite the allowance of this case at 215-641-7822 or by FAX at 215-641-7027.

Respectfully Submitted,

A handwritten signature in cursive script, appearing to read "Ronald D. Bakule".

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CERTIFICATE OF MAILING

I hereby certify that the following correspondence is being deposited as first class mail with the United States Postal Service in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated next to my signature below.

Amendment

DATE: Aug 5, 2003

SIGNATURE: Arnold D. Bakula